2021 GVMA Conference

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September 2021
Overview

• Non-mathematical support
• Mathematical support
• Modes of delivery
• Assessments
Transition to post-secondary is hard

- Away from home
- New academic environment
- Uncertainty and anxiety
- Effects on all of us from the last $\frac{3}{2}$ years
Non-mathematical support

- Waterloo Ready: in July and August; organized by Student Success Office
  - Community (includes upper-year peer mentoring)
  - Learning (Faculty-specific)
  - Experience (includes co-op, health & wellness, getting involved)
- International student resources
- Parents and supporters
Non-mathematical support

- Academic advising
- Counselling
- Awareness of mental health in general
- Awareness of mental health challenges of last 18 months
Non-mathematical support

- “Advising and Support Role”
  - Retired secondary school teacher with experience teaching at UW providing one-on-one support
  - Academics, Logistics, Emotional Support
  - Worked with dozens of students over Winter 2021 in sessions lasting from 20 minutes to 4 hours

- Selection of first-year Math instructors
Mathematical support

- CEMC courseware
  - Had 14M pageviews in 2020/2021
Mathematical support

- MTHEL 99
  - First-year transition course ("course")
  - Designed to help with missed learning and/or time lag since learning (e.g. earlier quadmester, gap year)
  - Offered over 5 weeks in August
  - All students in Math, Engineering and Science were enrolled in August 2021
  - Six units: Inequalities and Absolute Values; Radicals and Rational Expressions; Trigonometry; Exponential and Logarithmic Functions; Polynomials; Introductory Calculus
  - Organized by CEMC
  - Discussion boards monitored by a handful of secondary school math teachers
Mathematical support

- MTHEL 99
  - Six units: Inequalities and Absolute Values; Radicals and Rational Expressions; Trigonometry; Exponential and Logarithmic Functions; Polynomials; Introductory Calculus
  - Algorithmically generated assessments
  - Multiple attempts allowed
  - Needed at least 75% on each assessment AND average of at least 85% to receive “credit”
  - Integrity
Mathematical support

- MTHEL 99
  - Intended consequences: increase in students’ sense of confidence, recent practice
  - Unintended consequence: familiarity with technical infrastructure (LEARN, Piazza, Mobius)
Mathematical support

- Math Tutorial Centre
  - Available virtually in Fall 2021
  - Upper year and graduate student support
- Office Hours
  - Virtual
  - In person
Modes of delivery

- In Fall 2021, roughly half in-person, some blended, many fully online (often asynchronous)
- Asynchronous might be pre-recorded lessons or text-based
- In Winter 2022, “fully in-person”
- Technological tools are introduced
- Math courses had been moving to more active learning
- Steady state and required skills?
- Comparison with the past
Assessments

- Depends on the course
- Often “more frequent, lighter weight”

- Written assignments (often weekly, similar length to pre-pandemic; submitted electronically)
- Online items (e.g. quizzes, assignments, escape rooms)
- Many in-person courses back to closed-book, written midterm and final exams
- Some online courses have timed exams, often open-book, sometimes sequential

- Deadlines
- Collaboration
- Integrity
Good news!

- Students and instructors are very happy to be here.
- Instructors report that things feel relatively normal (despite differences).
Thank you!